New Hampshire Student Choice Policy

Educators in New Hampshire understand that the most successful teaching and learning results when performance-based lessons are personalized and students have a voice in directing their own learning pathways. Activities that support learning must address social, emotional, physical, and cognitive aspects of learning and provide comprehensive supports for students who might not be comfortable with certain learning activities. An activity in which living or dead animals are viewed, cut, killed, inspected, touched, handled, preserved, mounted, or otherwise manipulated in ways which may cause harm to them, is a potential source of ethical conflict or sensitivity that may adversely affect student learning. This policy provides an opportunity for students to replace such instructional activities with choices that are more engaging for them without loss of academic value.

The regulations and requirements set in this policy will cover all K-12 students in the school district and will be in place for all courses of study involving life science curriculum for which the use of animals, living or dead, might be considered a potential learning activity. Any activities that may cause ethical conflicts for students due to potential harm or death to animals shall fall under this Student Choice Policy. An animal is considered to be any organism, living or dead that is classified in the *Kingdom Animalia*.

Any student, for any reason, may choose to replace an activity that causes harm to animals, whether they be already dead, such in dissections, or living, such as animal testing, with an alternative activity that does not. Those instructors that teach dissection/vivisection in their classes should verbally announce the Student Choice Policy to all students on the first day of their class, and include the policy in their course syllabus. The policy is also available for review on the district website. Teachers should also inform their students that alternatives to killing, harming, or dissecting animals will be made available to them at the time of the activity in which animals will be used. Students must inform their teachers of their intention to replace an activity prior to the start of that activity. Teachers should include alternatives to the activities covered by this policy in their curriculum, and syllabi, and information on the replacement process should be provided in course syllabi and Program of Studies, or Course Catalogue.

While students should be given a voice in their alternative choices, the teacher has the responsibility of determining which alternate activities will allow students to meet the standards and learning objectives intended by the original activity. The teacher should maintain an updated list of approved alternate activities that still provide students with opportunities to meet competency for the standards being taught. Alternative activities should not be more difficult, or require more work or time than the original activity with which the student had ethical conflicts. These may include computer simulations, models, videos, and charts, all of which should be readily available to incorporate into life science exercises. A student's grade will not be affected in any way due to the choice of alternative to animal dissection or activities which harm animals. Likewise, the alternative choices will be comparable in depth and scope to the learning outcomes of the dissection activity and help the student meet competency in the standards.

Alternative Resources for Students and Teachers

The following resources offer alternatives to the use of animals for instructional activities:

General Information on Alternatives to Animal Dissection

- Teach Kind (www.teachkind.org)
- New England Anti-Vivisection Society (http://www.neavs.org/alternatives/overview)
- Norina (http://oslovet.veths.no/NORINA/)
- InterNICHE (*NEW link* http://www.interniche.org/en/alternatives)
- The Physicians Committee for Responsible Medicine (*NEW link* http://www.pcrm.org/research/)
- USDA Alternatives in Education (http://awic.nal.usda.gov/alternatives/alternatives-education)

Free Frog Virtual Dissections

- Virtual Frog Dissection Kit (http://froggy.lbl.gov/)
- Net Frog (http://frog.edschool.virginia.edu/Frog2/)
- Virtual Frog Lab (http://www.mhhe.com/biosci/genbio/virtual_labs/BL_16/BL_16.html)
- Frog Dissection Video (http://www.blinkx.com/watch-video/frog-dissection-instructions/PUCAAdxAwFdKUGPa1w4-7A)
- Virtual Frog Dissection Kit (itg.lbl.gov/Frog/)
- Interactive Frog Dissection: An Online Tutorial (http://curry.edschool.virginia.edu/go/frog/)

Free Fish Virtual Dissections

- Salmon Dissection (http://library.thinkquest.org/05aug/00548/DissectionGame.html)
- Perch Dissection (http://www.bio200.buffalo.edu/labs/tutor/Perch/Perch.html)
- Blue Mackerel Dissection (http://australianmuseum.net.au/Dissection-of-a-Blue-Mackerel-Scomber-australasicus)
- Virtual Shark Lab (http://www.pc.maricopa.edu/Biology/ppepe/BIO145/lab04.html)

Free Rabbit and Other Small Mammal Virtual Dissections

- Biology Corner's Virtual Rat Dissection (http://www.biologycorner.com/worksheets/rat_dissection.html#.UrBbN_RDtCO)
- Rat Anatomy Review (http://www.utm.edu/staff/rirwin/public_html/ratanat.htm)

Free Pigeon Virtual Dissections

- Vertebrate Anatomy Pigeon Dissection (http://www.savalli.us/BIO370/Anatomy/7.PigeonDissection.html)
- Pigeon Dissection Images (http://jb004.k12.sd.us/MY%20WEBSITE%20INFO/BIOLOGY%202/ANIMAL%20KINGDOM/PIGEON%20DISSECTION/PIGEON%20DISSECTION%20HOMEPAGE.htm)
- SUNY Buffalo's Virtual Pigeon Dissection (http://www.bio200.buffalo.edu/labs/tutor/Pigeon/Pigeon.html)

Free Fetal Pig Virtual Dissection

- Practice Anatomy Lab (PAL) (http://www.blangenberg.com/protected/pal2/)
- Virtual Pig Dissection (http://www.whitman.edu/academics/courses-of-study/biology/virtual-pig/)

Free Cat Virtual Dissection

- Practice Anatomy Lab (PAL) (http://www.blangenberg.com/protected/pal2/)
- Anatomically Correct: The Online Cat Dissection (library.thinkquest.org/15401/?tqskip1=1&tqtime=0530)
- Virtual Cat Dissection (bio.bd.psu.edu/cat/index.htm)

Free Virtual Dissection of Invertebrates

- Virtual Dissection Site: Crayfish, Earthworm, Squid, Frog http://biology.about.com/od/onlinedissections/
- Dissection of a Deer Tick (http://www.ent.iastate.edu/imagegal/ticks/iscap/tickdissection/)
- The Crayfish Corner (http://www.mackers.com/crayfish/)
- SUNY Buffalo's Virtual Crayfish Dissection (http://wwwbio200.nsm.buffalo.edu/labs/tutor/Crayfish/)
- Cornell University's Earthworm Review (http://biog-1101-1104.bio.cornell.edu/biog101_104/tutorials/animals/earthworm.html)
- University of Georgia's The Virtual Roach (http://www.ent.uga.edu/mchugh/Virtual_Roach.htm)
- Microscopy UK's Cockroach Dissection (http://www.microscopy-uk.org.uk/mag/indexmag.html?http://www.microscopy-uk.org.uk/mag/artaug05/wdparasite3.html)
- Cornell University's Squid Review (http://biog-1101-1104.bio.cornell.edu/BioG101_104/tutorials/animals/squid.html)
- Online Dissections: Earthworm, Frog, Sea Urchin (http://scienceman.org/dissection.html)

Free Owl Pellet Dissection

- Kidwings: Virtual Owl Pellet Dissection (http://www.kidwings.com)

Free Cow Eye Virtual Dissection

- Exploratorium's Cow's Eye Dissection (http://www.exploratorium.edu/learning_studio/cow_eye/index.html)

Free Sheep's Brain and Heart Virtual Dissection

- Practice Anatomy Lab (PAL) (http://www.blangenberg.com/protected/pal2/)
- University of Scranton's Dissection of the Sheep Brain (*NEW link* http://www.scranton.edu/faculty/cannon/sheep/framerow.html)
- Exploratorium's Sheep Brain Dissection: The Anatomy of Memory (http://www.exploratorium.edu./memory/braindissection/index.html)

- Atlas of the Sheep Brain (*NEW link* https://www.msu.edu/~brains/brains/sheep/index.html)
- Comparative Mammalian Brain Collections (brainmuseum.org)
- Veterinary Gross Anatomy Online Lab (cal.vet.upenn.edu/projects/neurology/lab2/lab2.htm)
- The Virtual Heart's Cardiac Anatomy (http://thevirtualheart.org/anatomyindex.html)

Free Human Anatomy Virtual Dissection

- Practice Anatomy Lab (PAL) (http://www.blangenberg.com/protected/pal2/)
- The Heart: An Online Exploration (http://sln.fi.edu/biosci/heart.html)
- US National Library of Medicine Visible Human Project Gallery (http://www.nlm.nih.gov/research/visible/visible_gallery.html)
- The Virtual Heart's Cardiac Anatomy (http://thevirtualheart.org/anatomyindex.html)
- Virtual Hospital's The Human Brain: Dissections of the Real Brain (http://www.vh.org/adult/provider/anatomy/BrainAnatomy/BrainAnatomy.html)

Free Chick Hatching and Developmental Biology Virtual Labs

- Virginia Tech's "4-H Virtual Farm": Chicken Embryo Development (http://www.ext.vt.edu/resources/4h/virtualfarm/poultry/poultry_development.html)
- The University of Illinois' "Chickscope" (http://chickscope.beckman.uiuc.edu/explore/embryology/)
- The Exploratorium's Traits of Life: Making More Life (http://www.exploratorium.edu/traits/more.html)
- NOVA Online: Odyssey of Life (http://www.pbs.org/wgbh/nova/odyssey/clips/movchi.html)

Commercially Available Digital Dissection Software Packages

- Froguts: This online software supplies lessons that are systems-based and integrate anatomy, physiology, and ecology through interactive and engaging simulations. Interactive virtual tools include microscopes and scalpels, and randomized quizzes help test students' knowledge. Virtual dissections are available for the frog, the starfish, the squid, the owl pellet, the cow eye, and the fetal pig. Also included are pea lab and fly lab simulations. (http://www.froguts.com)
- Digital Frog's DigitalFrog 2.5 provides an interactive virtual frog dissection and seamlessly links the dissection to an anatomy and physiology section, with a comparative anatomy feature. Digital Frog has also undertaken an in-depth evaluation of the ways its programs meet the educational needs of K-12 students in the U.S. (Digital Frog International, "DFI Software and Curriculum Standards," digitalfrog.com/resources/curriculum.html). (digitalfrog.com/products/frog.html)

Creating a Student Choice Policy

When creating a student choice policy, make sure that you are thorough in including all of the important points that it needs to cover. The following is an example of specific points that a student choice policy should include and clarify.

- **Who will be affected by the student choice policy?** The policy should outline whether this covers the entire campus or just certain departments. The policy must also indicate whether it will be available to all classes where students may choose not to dissect.

- **What activities are included in this student choice policy?** Any activities that cause harm to animals should fall under the protection of the student choice policy. It is important that the policy clearly defines what 'animal' means. For example, the policy should explain whether it protects all living creatures in the kingdom 'Animalia', or whether it only applies to vertebrates. These are important issues to consider.

- **Who has the responsibility of obtaining a non-animal alternative?** The policy should explain whether the responsibility of creating or obtaining an alternative lies with the teacher or with the student. If responsibility lies with the student, the policy must indicate when the student should obtain the alternative. If responsibility lies with the educator, the policy should explain when the student must inform the educator that she or he needs an alternative. The policy must also outline any time limitations for informing the educator that the student does not want to dissect.

- **What constitutes an acceptable alternative?** Generally, requiring the student to watch others dissect an animal is not an alternative. Even if the students is allowed to leave the room while the dissection is taking place, it is not acceptable for him/her to come back and take an exam on a dissected animal. An acceptable alternative is one that does not cause any harm to animals.

- **Will students be penalized in any way for choosing the alternative exercise?** This should never happen and is why such policies are necessary. Students using the alternative exercises should receive the same credit/grading system and workload as those participating in traditional dissection/vivisection. All school faculty members shall respect a student's choice to dissect/vivisect or not to dissect/vivisect. A student must feel free to choose an alternative to dissection without fear of being singled out or pressured.

- **Will students be informed in writing of their option to choose not to dissect/vivisect at the beginning of each course? Will it be noted in the course catalog?** These are preferable because it will allow the student time to obtain an alternative. The minimum timeframe should be two to three weeks prior to the scheduled dissection/vivisection.

- **How are students informed that a student choice policy exists?** Those instructors that still teach dissection/vivisection in their classes must verbally announce the policy to all students on the first day of the semester and on the day of the dissection/vivisection lesson, or it can be included in the course catalog.

*From **Animalearn: Animals, Ethics, and Education***
http://www.animalearn.org/dvPolicy.php#.UvABr7QIPQA